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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,705	12/19/2000	Bruce A. Schofield	2204/A77	5025
7590	12/05/2003		EXAMINER	
STEUBING MCGUINNESS & MANARAS 125 NAGOG PARK DRIVE ACTON, MA 01720			NGO, HUNG NHAT	
			ART UNIT	PAPER NUMBER
			2633	8
DATE MAILED: 12/05/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/740,705	SCHOFIELD, BRUCE A.	
	<b>Examiner</b> Hung N Ngo	<b>Art Unit</b> 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 03 November 2003.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) 10-16 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-9, 17 and 18 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1) Notice of References Cited (PTO-892)                    4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)                    5) Notice of Informal Patent Application (PTO-152)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.                    6) Other: \_\_\_\_\_

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al (JP05313082) in view of Wang et al (4,220,395). Inoue et al discloses optical communication system comprising a first number M of fixed wavelength lasers (20-22) coupled to a second number N of external modulators (13) through a photonic cross-connect switch (3), wherein the photonic cross-connect switch is capable of routing the optical carriers of any N of the M fixed wavelength lasers to the N external modulators while maintaining the polarity of the N optical carriers routed to the N external modulators (Fig. 4). The reference does not disclose the N external modulators are coupled to N data signals for producing N optical data streams from the N optical carriers and the N data signals. However, modulators 13 of Inoue et al is a polarizer for controlling the polarization of light in the waveguides, and it is well known in the art to provide a signal to control the polarization of light in an optical waveguide (see Fig. 16(a) and lines 30-50 of column 22 of Wang et al). Therefore, it would have been obvious to one of ordinary skill in the art to provide a signal to the polarizer of Inoue et al for controlling the polarization in the waveguide. The outputs of the fixed wavelength lasers (20-22) comprises optical carriers at distinct wavelengths. The photonic cross-connect switch (3) comprises: at least M (three) optical inputs coupled to the outputs of the M fixed wavelength lasers; at least N (two) optical outputs coupled to the inputs of the N external modulators; and a photonic cross-connect fabric coupled to the at least M optical inputs and to the

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at least N optical outputs via polarization maintaining fiber for routing the optical carriers of any N of the M fixed wavelength lasers to the N external modulators (Fig. 4). It is well known in the art to use a photonic cross-connect fabric comprises a Micro Blectro Mechanical System (MEMS), a Micro Opto Electro Mechanical System (MOEMS), a bubble (champagne) optical switching system, a lithium niobate optical switching system, or a liquid crystal optical switching system in an optical communication system.

3. Claims 10-16 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung N Ngo whose telephone number is (703) 308-0297. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703-305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
Hung N Ngo  
Primary Examiner  
Art Unit 2633

hn